FY 2007 STEP Research Plan

Below is information on the FY2007 STEP Plan. This plan reflects a review of stakeholder feedback submitted through early October, SAFETEA-LU, other directives, and other current or planned research activities and research needs.

Proposed and anticipated funding levels for the FY2007 STEP Plan are subject to the completion of the FY2007 Department of Transportation appropriations legislation.

Table 1, below, lists the total number of research projects that are expected to be carried out in each emphasis area, with the anticipated FY 2007 STEP Budget. Table 2 (on the following pages) includes summary information about each project proposed within each emphasis area. The summary information includes the emphasis area, email contact information, the title of the activity, a short summary of the activity, and the proposed funding amount.

Table 1: FY 2007 STEP Plan by Emphasis Area

Emphasis Area	Research Initiatives	Anticipated FY 2007 STEP Budget
ENVIRONMENT EMPHASIS AREAS		
NATURAL ENIVRONMENT		
Air Quality and Global Climate Change	7	$1,250,000
Water Wetlands, Vegetation, Wildlife Habitat, Brownfields	8	$1,070,000
HUMAN ENVIRONMENT		
Historic Preservation	1	$170,000
Bicycle/Pedestrian and Health	1	$70,000
Noise	5	$200,000
Outdoor Advertising Control/Realty Program Management	2	$200,000
ENVIRONMENTAL PROCESS IMPROVEMENT		
Environmental Streamlining/Stewardship	6	$2,100,000
Context Sensitive Solutions	3	$500,000
PLANNING EMPHASIS AREAS		
NATIONAL/INTERNATIONAL PLANNING		
US/Canada and US/Mexico Border Planning	4	$400,000
National Security, Defense and Interstate Planning	3	$300,000
PLANNING FOCUS AREAS		
Congestion	1	$650,000
Safety Planning	1	$80,000
Freight Planning	1	$100,000

STATE/LOCAL/TRIBAL PLANNING CAPACITY BUILDING

Public Involvement, Environmental Justice, Visualization in Planning	1	$425,000
Other Activities that Support State/Local/Tribal Planning Capacity Building	11	$2,635,000

TOOLS TO SUPPORT PLANNING AND ENVIRONMENT EMPHASIS AREAS

GIS/Spatial Information for Improved Decision Making	6	$350,000
Travel Modeling	1	$250,000

PROGRAM MANAGEMENT AND OUTREACH	3	$1,000,000

TOTAL	**65**	**$11,750,000**

Anticipated Research Efforts in Environment

Air Quality and Global Climate Change

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Research Activity or Project	Project Summary	STEP Budget
Testing, Evaluation and Validation of New Emission Model	EPA has been developing the next emission model, MOVES, for several years. This new model, which will replace the existing emissions model, will be required for a variety of emissions and air quality analysis for conformity and NEPA regulatory purposes. This multi-year research effort would include a number of tasks, including reviewing the MOVES model and identifying issues of concern for the transportation community and evaluating, testing, and validating the model to assure accurate and relevant results. Possible tasks may include: ▪ Identify transportation data collection needs ▪ Identify model calibration and validation issues related to transportation/traffic data, such as modal activities and traffic operations ▪ Conduct sensitivity analysis ▪ Develop and conduct training for transportation agencies	$200,000
Research on Conducting Project Level Analysis of Particulate Matter (PM) Emissions	In 1997, EPA promulgated fine PM standards for the first time. These standards became effective in 2004. In 2006, EPA revised the PM standards, and it is expected that more areas will be subject to the more stringent standards. In its conformity regulations, EPA acknowledged that the current emissions model is not appropriate for conducting local emissions impact. In the absence of an appropriate model and guidance, and although PM local hot-spot analysis has been required since 1993, EPA has yet to require quantitative emissions analysis until a new emissions model and associated analysis guidance are released. This research will examine a number of issues related to the PM project	$150,000

	level analysis. Given the number of issues, it is anticipated a series of research will be conducted through the next three years. The entire research effort will cost about $400,000 to $450,000. The issues will include: traffic characteristics and its relationship to PM emissions; evaluate and improve dispersion models; methodologies to calculate emissions benefits for project level mitigation measures; "before and after" analysis for emissions impacts of transportation strategies such as ramp metering, HOV and HOT lanes, etc; and conduct research to support future categorical conformity findings -- a new regulatory flexibility allowed for project conformity analysis and determinations. Products of this research effort will be a series of reports documenting findings of each research task.	
Survey and Assessment of State and Local Climate Change Activities, and Transportation and Dissemination of Research and Best Practices	In the absence of Federal regulation or guidance to address climate change, state and local governments have begun taking action on their own. States are setting targets for reducing their greenhouse gas emissions, adopting policies to promote renewable energy efficiency, and developing statewide climate action plans. To date, 28 U.S. states have adopted climate action plans. This research effort would collect and evaluate measures that are being taken at state and local levels to address climate change. The effort may include convening a workshop or forum for state and local governments to record and exchange information. It may also include partnering with one or more MPOs to participate in a pilot to explore integrating climate change considerations into the transportation planning process through visioning or scenario planning, to be used as a model or "best practice" for other MPOs and State DOT's interested in integrating climate change considerations into their long range transportation planning process. In addition, there is a need for the development of a mechanism, such as a clearinghouse, to exchange and disseminate information among federal, state and local transportation stakeholders so that it can be used to inform transportation decisions-makers on climate change issues.	$150,000
CMAQ: Developing Strategies and Improved Information for Future Project Selection	This proposed research focuses on the information and database management needs of the CMAQ program required by Section 1808(f) of SAFETEA-LU as well as statutory priorities for project selection brought about by SAFETEA-LU. Elements proposed include further technical development of the CMAQ Automated Reporting System for	$225,000

	FY 06 and 07, database management and quality–assurance of CMAQ annual reports, and the development of a CMAQ Toolkit that targets priority projects. In addition, the emphasis in SAFETEA-LU on cost-effectiveness as applied to congestion mitigation and emission reduction strategies is a growing element of the CMAQ program, and a key part of this cost-effectiveness focus in the statute is diesel engine retrofit projects. Consequently, a further component of this research is the identification of the tools available via the CMAQ program for States and local governments to pursue these cost-effective strategies, such as diesel engine retrofits and construction vehicle repower, in their transportation-air quality programs. The objectives of this research include comprehensive database management and support of the CMAQ program and the identification of tools and resources available to States and MPOs to help bring about cost-effective CMAQ projects. Products include completed, quality enhanced database management files, and a CMAQ toolkit or manual available for widespread use by States and local governments.	
Literature Review of Air Toxics and PM Research	Air Toxics and fine PM continue to be raised as concerns on transportation projects, although many uncertainties exist about their behavior and impacts. Research on air toxics and fine PM is extensive and of varying quality, and continues to be updated and revised rapidly. However, keeping abreast of this evolving research and assessing its merit is necessary in order to properly address air toxics and fine PM. This research would summarize, analyze and/or synthesize research on mobile source air toxics and fine particulate matter, focusing on those issues of the greatest concern to the transportation community. The research may cover topics such as: dispersion, near-roadways impacts, secondary formation of fine PM, MSAT reactivity, health impacts of MSATs and PM, uncertainty associated with the modeling of MSAT and PM emissions, etc.	$50,000
Support for Climate Change Center Research	The transportation sector contributes a significant amount of carbon dioxide (CO_2) emissions—the predominant greenhouse gas. The transportation sector was responsible for 32.4 percent of all U.S. CO_2 emissions in 2003. The Department created the DOT Center for Climate Change and Environmental Forecasting in 1999, a multi-modal organization that evaluates relevant technologies, practices, and policies to limit or reduce transportation-related greenhouse gas emissions	$350,000

	through its research agenda. This research effort will fund additional projects that will be selected by the Center as part of the annual Action/Implementation Plan, and to support the initiatives and goals in the Center's recently completed Strategic Plan (2006-2010).	
Ongoing Support for the Gulf Coast Study on Analyzing Impacts of Climate Change on Transportation Infrastructure	The DOT Center for Climate Change has undertaken a significant research study in the Gulf Coast area analyzing the Impacts of Climate Change and Variability on Transportation Systems and Infrastructure. FHWA has taken the lead on this project for the Center. The overall research is anticipated in three phases under the Prospectus published under notice and comment in the Federal Register. Phases 2 and 3 will examine the potential impacts of climate change from an engineering perspective, and develop a decision tool to assist planners where such impacts may be important to plan for. This research effort would provide additional support for completion of Phase 1 of the Study.	$125,000

Water/Wetlands/Vegetation/Wildlife/Habitat/Brownfields

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Research Activity or Project	Project Summary	STEP Budget
Advancing Methods, Maps, and Tools Used for Decision Support and Impact Analyses for Transportation, Wildlife, & Ecological Systems	Capitalize upon advancements in wildlife and ecosystem analysis methods, mapping, and tools and expand the use of these advancements in the transportation industry. Three specific and one broad research emphasis area will capitalize upon advancements as (1) 2005 State Wildlife Action Plans and mapping processes; (2) the NAS 2005 study and framework for "Assessing and Managing the Ecological Impacts of Paved Roads" including methods and models; (3) uses of the National Spatial Data Infrastructure (NSDI); (4) as a broad research emphasis area - efforts will incorporate new needs and advancements identified as research proceeds. Results from each research emphasis area will also dovetail together to support environmental responsibilities within transportation.	$140,000

International Stormwater BMP Database	Although literature exists on stormwater best management practices (BMPs) and their design, maintenance and overall effectiveness, nothing has been located in a centralized, easy-to-use repository for use in assessing the appropriateness of BMPs under various conditions. The information that is contained in literature has been collected and developed using, at times, inconsistent methods and reporting formats. This has made it difficult to effectively evaluate the data for trends in effectiveness in BMPs for use in scientific assessments of each measure. The Urban Water Resources Council (UWRC) of the American Society of Civil Engineers (ASCE) entered into a cooperative agreement with the U.S. Environmental Protection Agency (USEPA) to develop a scientifically based approach and a management tool for the data needed to evaluate the effectiveness of stormwater runoff BMPS, regardless of their location, climate and land uses being served. The result of their efforts was the International Stormwater BMP Database. The long-term goal is to collect sufficient data that will permit improvements in BMP designs and to better match the selection of BMP to the local stormwater challenges of an area. The work is ongoing and the database is currently accessible through the Web site at http://www.bmpdatabase.org. We are also planning a teleconference in the fall of 2006 to showcase information in the database and solicit more monitoring information.	$50,000
FHWA Pollutant Loadings Model	Stormwater runoff models are needed to interpret data collected by field studies, support existing highway and urban runoff planning processes, meet National Pollutant Discharge Elimination System (NPDES) requirements and provide methods for calculation of Total Maximum Daily Loads (TMDLs) in a systematic and economical manner. FHWA formulated a model to predict pollutant loadings and impacts from highway stormwater runoff in 1990. The model had several limitations, so the Federal Highway Administration and the U.S. Geological Survey are cooperating on a national project to evaluate and update the existing 1990 FHWA Pollutant Loadings Model for highway stormwater runoff using new information and software. There will also be training materials developed to facilitate use of the model.	$150,000
Wildlife Usage of Wetland Mitigation Areas	How wetland mitigations replace wildlife function and values has received little attention despite efforts by wetland regulators to require	$125,000

	performance standards for wetland mitigation areas. The focus should be on wetland mitigation banks as they typically possess a greater area than project-by-project mitigations and therefore provide more habitat opportunity. Wetland mitigations are often planned to compensate for flood attenuation, filtration, and specific plant community composition but not usually designed for specific or a variety of wildlife species. The usage of wetland mitigations by wildlife should be documented by habitat type and species using that particular habitat. A comparison can be made to the impacted wetland to verify if the mitigation site is compensating for the same or different wildlife usage. The data collected could possibly be integrated into a predicative model for determining which animal species and how many different species use a particular habitat type. Standardized methods to collect such information would be beneficial in determining how specific mitigation design elements contribute to successful mitigation of wildlife function. The objective of this research will be to document specific wetland habitat and the variety and number of wildlife species utilizing that habitat. The research may be useful for designing wetland mitigations to achieve a specific or desired variety of wildlife species based on their habitat requirements and use.	
Economic and Ecological Benefits of Reduced Mowing (including wildlife)	An ongoing vegetation maintenance question is: to mow or not to mow. During this time of limited resources, States are interested in a more ecological approach, which includes reduced mowing. Reduced mowing can still accomplish all safety concerns of visibility and errant vehicles, while increasing ecological benefits. This research would focus on two aspects: reduced cost from reduced mowing, and ecological benefits. Reduced mowing has actually been legislated in Minnesota and Michigan. Examining their cost savings could be documented. Ecological benefits include increased small wildlife habitat, including pollinators. This has not been documented. The issue of loss of habitat in general, and loss of pollinator habitat specifically is not being addressed in highway corridors, where conservation potential exists on a large scale. The objective of this research would be to document small wildlife (e.g., birds, small mammals, pollinators) use of regularly mowed highway rights-of-way versus reduced mowing of rights-of-way (preferably in native vegetation ROW as in States of Missouri, Iowa, Michigan, or Indiana. States with grassland and forested roadsides).	$50,000

	Rural State, Interstate, and County corridors should be sampled in one region, at a minimum. Reduced mowing will be defined as mowing of one swath along the edge of rural highways. Regular mowing is mowing a 30-foot clear zone no less than 3 times a year. The product of this research will be a published, peer-reviewed, study that will affect State Departments of Transportation reduced mowing policies across the country. If the economic and ecological benefits exist, as hypothesized, vegetation management will become more environmentally sensitive on the ground.	
Environmental Benefits of Using Recycled Materials on Transportation Projects	The use of recycled materials during highway construction can offer measurable environmental, engineering, and economic benefits to States. Conversely, the beneficial reuse of such material can present real challenges. During the past few years, there has been a concentrated effort to elevate the use of recycled products in highway construction/reconstruction, operation, and maintenance activities. One of the hindrances in using recycled materials is a lack of complete understanding of the benefits, particularly the environmental benefits, of using recycled materials. Ongoing policy and program initiatives are indicative of the importance of using recycled materials and the need to fill existing gaps in knowledge. Research is needed to increase understanding of the environmental impacts and benefits of using recycled materials in highway construction. A greater understanding of the full impacts and expected level of performance of specific recycled materials, compared to virgin sources, will improve the decision making process, and aid environmental stewardship initiatives. The beneficial reuse of construction and industrial byproducts is one of the focus areas of the recently formed Green Highways Partnership (GHP). A better understanding of how specific recycled materials perform and interact with the environment will present options to transportation decision makers that will help them to maximize opportunities to conserve natural resources, increase green space, reduce the amount of wastes being sent to landfills, and minimize the negative impacts of highway construction on the environment.	$30,000
Research and Innovation Agreements with USFWS, USACE, and USFS	Many FHWA programs and projects depend on timely completion of environmental requirements administered by other Federal agencies. Among the requirements, which are most critical and prevalent on most projects, are the Endangered Species Act, Migratory Bird Treaty Act,	$425,000

	Fish and Wildlife Coordination Act – all administered by USFWS, and the Clean Water Act, specifically Section 404 and Section 10 permits administered by the USACE. Further, many projects involve lands managed by the USFS and must meet their requirements in order to proceed. Pursuant to Section 1309 of Transportation Equity Act for the 21st Century (TEA-21), FHWA established national transportation liaison programs with the USFWS, USACE, and USFS to conduct research and advance interagency innovations in environmental stewardship and environmental streamlining. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" (SAFETEA-LU) contains a number of provisions that continue and expand the stewardship and streamlining direction of TEA-21. This research effort will provide for continued research into interagency coordination on the major environmental requirements that affect the highway program. The results of the research will be used to develop recommendations and prototypes for additional programmatic guidance, facilitate the development of process improvements, disseminate the results of research through enhanced inter-agency coordination and to support the development of training capabilities that promote early coordination and process improvement efforts between agencies, FHWA and State DOTs.	
Linking Eco-logical to Planning and Project Development	In early 2006, FHWA and seven other Federal agencies released the document, Eco-Logical: An Ecosystem Approach to Developing Infrastructure projects. The ecosystem approach, as outlined in *Eco-Logical* identifies and addresses the greatest conservation needs associated with mitigation for infrastructure projects. *Eco-Logical* articulates a vision of how infrastructure development and ecosystem conservation can be integrated to harmonize economic, environmental, and social needs and objectives. Applied research is needed to field test the Eco-logical Document. Via a national solicitation, stakeholders and co-funders will be identified to test Eco-logical principals with a focus on complying with SAFETEA-LU planning and project development provisions. This proposal would make funds available for grants to state and local governments, MPOs and others to implement an ecosystem-based approach pilot project.	$100,000

Historic Preservation

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Research Activity or Project	Project Summary	STEP Budget
Research and Innovation Agreement with Advisory Council on Historic Preservation	New provisions in SAFETEA-LU and recent updates to the regulations implementing Section 106 of the National Historic Preservation Act have created additional opportunities and methodologies for better coordinating historic preservation provisions with the broader scope of the National Environmental Policy Act and Section 4(f) of the Department of Transportation Act. These provisions demand the identification and implementation of all possible efficiencies in the environmental review process, particularly as it addresses historic preservation and cultural resources. Tools that support schedule and project management, efficient evaluation and data management techniques, and process improvements such as programmatic agreements will be in ever-higher demand. These innovative tools need to be identified, evaluated, and marketed to ensure effective integration of historic resources as part of an efficient environmental review process. The objective of this research will be the identification, marketing and dissemination of best practices for developing innovative approaches and programmatic agreements, achieving early coordination with stakeholders, and gaining efficiencies in project development and review. The results will be captured in the development of best practices and prototypes that facilitate environmental process improvements.	$170,000

Bicycle/Pedestrian and Health

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Research Activity or Project	Project Summary	STEP Budget
Collection of Data on Pedestrian and Bicycle Use and the Extent of Facilities	This research will (1) collect and synthesize existing data collection efforts (both survey and observational) at national, regional, and local levels; (2) determine exactly what measures of use and facility extent would be most useful; and (3) develop mechanisms for reliably and consistently collecting the needed data in the most cost effective and practical ways possible. This effort builds on previous work.	$70,000

Noise

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Research Activity or Project	Project Summary	STEP Budget
FHWA Traffic Noise Model Version 3.0 Development	The FHWA TNM Version 3.0 has been under development since mid-2004. If Version 3.0 is not funded to completion, the FHWA TNM will reach a point where the software will no longer operate with advancing computer technology. The FHWA TNM Version 3.0 will contemporize the code to prevent an obsolete model due to platform incompatibility; re-organize the code to allow for more efficient future software development and maintenance; and update/removal of an aging third party database that is becoming obsolete.	$25,000
FHWA Traffic Noise Model Increased Ldn Capability	This research project is being jointly funded by the U.S. Department of Housing and Urban Development (HUD). Currently, FHWA TNM can calculate L_{DN} but the input is not flexible for TNM users. In the L_{DN} traffic input dialogue box, the Average Daily Traffic (ADT) is entered, and then the vehicle counts are divided into percentages of the ADT by time of day (either day or night). FHWA TNM requires the daytime percentage	$25,000

	and nighttime percentage to each add up to 100%. The L_{DN} calculation assumes that the traffic counts for the daytime period are equal for each of the 15 hours of the daytime period, and the traffic counts are equal for each of the 9 hours of the nighttime period. HUD requires different input parameters with more detailed traffic information. Modifying these input parameters reduces the burdens of environmental requirements for HUD constituents and for FHWA TNM users.	
FHWA Traffic Noise Model/Pavement Validation Study	This research will begin by determining the validity of the FHWA TNM v2.5 in relation to varying the pavement type. The validity of introducing more advanced pavement affects into future versions of the FHWA TNM is also needed. This will be done by performing validation studies, which involve data collection, FHWA TNM modeling, and the comparison of measured and predicted data.	$110,000
Tire/Pavement Noise Measurements: Temperature Effects Study	There needs to be a better understanding on how temperature, both pavement and air, affects tire/pavement noise, in order to properly predict noise levels and compare data for the purposes of advancing quieter pavement design and selection. This research would allow for a better understanding of the impact that temperature can have on tire/pavement noise and the resulting highway traffic noise that reaches communities. It would also result in recommendations on how to account for temperature affects. Results of this research effort will guide tire/pavement noise and quieter pavement researchers in properly accounting for the effects of temperature on tire/pavement interaction noise.	$30,000
Tire/Pavement Noise Research Consortium Pooled Fund	Contribute to the TPF-5(135): Tire/Pavement Noise Research Consortium, sponsored by the Washington State Department of Transportation. This Pooled-Fund Project will: ▪ Provide a forum for State DOTs to discuss noise issues, utilize the same techniques to build a larger database, and share data. The ultimate goal is to incorporate pavement type into the FHWA Traffic Noise Model; ▪ Perform a synthesis of global practice in regards to utilizing pavement technology for decreasing tire/pavement noise; ▪ Perform a synthesis on the cost/benefits of using low-noise pavements; ▪ Assist in the development in standards: measurement, tire and vehicle;	$10,000

	▪ Produce a document for general public information regarding noise reduction; ▪ Provide a guideline for best practices in measuring and evaluating noise benefits and decreases over the wearing life of the roadway surface. More information can be found at: http://www.pooledfund.org	

Outdoor Advertising Control/Realty Program Management

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Research Activity or Project	Project Summary	STEP Budget
The Safety Effects of Electronic Advertising Signs on Driver Attention	This driver study will require a broad sampling of travel related analyses. The project will provide eye movement reflexes studies, with both day and night testing. Testing will reflect the focus of the driver to the task of driving when billboards are either blank or dark, and when billboards' messages are moving or brilliantly lit. The study will provide an insight on the impact of sign structures to drivers. This study will provide interviews with random sampling of individuals regarding the aesthetic value of advertising structures and solicit opinions on their benefits and/or detriment to traveling. This project will assist all government jurisdictions to make better decisions regarding regulations relating to sign structures adjacent to travel routes.	$150,000
Identifying Research Questions on the Impact of Outdoor Advertising to the Economy of the Surrounding Area	In policy decision-making concerning outdoor advertising control, many contend billboards are essential for businesses and tourism, others contend that the absence of billboards has no detrimental effect for businesses and tourism. This preliminary study would identify the research questions concerning the benefits and the losses that are experienced by the placement of advertising signs adjacent to highways. This study would identify different elements of the business sector: businesses that advertise necessary services required by the traveler,	$50,000

	e.g. restaurant, gas, camping, etc; businesses that advertise products, e.g., auto/boat sales, name brands products such as drinks or food, insurance, etc.; and businesses that advertise tourism sites, e.g., caves, lakes, parks, casinos, attractions, etc. The study may determine whether to include the effectiveness of LOGO and TODS signs to develop a baseline for business visibility under current law and programs. Actual economic effects studies by marketing organizations or entities may provide identification of trends to reinforce or dispute these contentions. This project will determine the basis for future research to assist all government jurisdictions to make better decisions regarding regulations relating to sign structures adjacent to travel routes.	

Environmental Streamlining / Stewardship

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Research Activity or Project	Project Summary	STEP Budget
Linking Eco-logical to Planning and Project Development	In early 2006, FHWA and seven other Federal agencies released the document, Eco-Logical: An Ecosystem Approach to Developing Infrastructure projects. The ecosystem approach, as outlined in *Eco-Logical* identifies and addresses the greatest conservation needs associated with mitigation for infrastructure projects. *Eco-Logical* articulates a vision of how infrastructure development and ecosystem conservation can be integrated to harmonize economic, environmental, and social needs and objectives. Applied research is needed to field test the Eco-logical Document. Via a national solicitation, stakeholders and co-funders will be identified to test Eco-logical principals with a focus on complying with SAFETEA-LU planning and project development provisions. This research activity would make funds available for grants to state and local governments, MPOs and others to implement an ecosystem-based approach pilot project.	$400,000
Executive Order 13274 Implementation	Executive Order (EO) 13274 *Environmental Stewardship and*	$400,000

Activities	*Transportation Infrastructure Project Review"* was issued in 2002. The Task Force, which was established by the EO, identified three areas where Federal coordination and decision-making should be better integrated or where there are opportunities for process improvements: (1) purpose and need; (2) indirect and cumulative effects; and (3) integrated planning. Three work groups were formed to investigate the potential for improvements in these areas. Initial research was conducted by the workgroups in 2003 resulting in the development of baseline reports and work plans. Continued support is necessary to implement activities of Task Force and the Work Groups. This research project will entail: management and logistical support; support for EO priority projects such as conflict resolution services; funding for innovative practices and pilots; preparation of the required report to the President; and support for specific activities as identified in the Work Groups' work plans.	
Environmental Competency Building	Maintaining knowledge and expertise at the FHWA, State DOTs, resource agencies, and the consulting industry is essential to the effective delivery of an environmentally sensitive transportation program. FHWA Environmental Competency Building (ECB) program is an ongoing research effort focused on the current and future multidisciplinary professional development needs of transportation and environmental professionals. The ECB serves the transportation and environmental community by providing access to relevant information, guidance, training, and recommendations that will assist the long term development and maintenance of environmental and transportation professionals. This research effort will support the continued development of ECB and will also include the completion of the Advanced NEPA Seminar and development of a new Section 4(f) training course.	$355,000
Advancing Innovations in FHWA's Environmental Review Process	FHWA continually pursues innovation in the environmental review process. SAFETEA-LU contained a number of new important environmental provisions that are aimed at improving efficiency in highway program and project delivery. FHWA will undertake a research effort to monitor and document the impact of these new provisions on the environmental review process. This research will provide support for the continued development of performance measurement systems, including the Environmental Document Tracking System, to gather the	$415,000

	relevant data. Documentation regarding best practices and case studies will be developed to facilitate technology transfer on the new provisions. FHWA will assess and report out on the implementation of the new provisions.	
Assessment of the Surface Transportation Project Delivery Pilot Program: Evaluating FHWA's Role in the NEPA Process	The object of this research will be to determine the value of FHWA in the NEPA process. The audits of the pilot program will be used to compare various performance measurements before the pilot program with those measurements during and after the pilot program is completed. Prior to the actual delegation to the States, and the start of the auditing process, staff from FHWA, DOTs, and Federal resource agencies who will be involved in the Pilot Program and the auditing will be trained in compliance auditing principles and procedures. An audit team, composed of 5-6 persons, will visit each delegation State to perform the actual audits. An audit report, which will be made available to the public for comment, will be prepared for each audit. The audit reports completed each year will become part of the annual Report to Congress for the Pilot Program.	$240,000
Environmental Stewardship and Streamlining Outreach and Technology Transfer	The efficient and effective coordination of multiple environmental reviews, analyses, and permitting actions is essential to meeting the Environmental Streamlining and Stewardship mandates for highway and transit projects under SAFETEA-LU. FHWA has made substantial investments in developing methods, tools and techniques to improve the quality and efficiency of environmental decision-making. Support for ongoing initiatives as well as the development of new mechanisms is necessary. This research effort will result in the following technology transfer and outreach deliverables: maintenance and update of the Environmental Review Toolkit available on the FHWA Web site; continuance of Re: NEPA, FHWA's community of practice for environmental professionals; Support for planning of FHWA's Environmental Conference; promotion of conflict resolution tools and techniques; and publication of Successes in Stewardship.	$290,000

Context Sensitive Solutions

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Research Activity or Project	Project Summary	STEP Budget
Context Sensitive Solutions (CSS) Clearinghouse	The purpose of this research is to facilitate the exchange of information on Context Sensitive Solutions (CSS) related issues and topics nationally. The outcome of this research will be a CSS clearinghouse and associated services. The objective of the clearinghouse is to serve as "the source" within the industry where practitioners are able to immediately access CSS information and available resources electronically. CSS activities, resources and information to be included on the clearinghouse will include: technical resources; locate state and local CSS examples; inventory of current agency CSS practices, policies and programs, ask a CSS question; and find a CSS training course. The intended audience of the CSS clearinghouse is any practitioner who may be responsible for, or engaged with, any activity that involves integrating CSS within their agency or during any phases in the life cycle of a roadway facility.	$200,000
Advancing Context Sensitive Solutions (CSS) Implementation: Stakeholder Exchange	Many initiatives have been launched by both AASHTO and FHWA focused on mainstreaming Context Sensitive Solutions (CSS) throughout the transportation industry. In September 2006, AASHTO and FHWA sponsored a National Peer Exchange on CSS to understand what state DOTs are currently doing to integrate CSS into project delivery and to identify respective challenges with integrating/mainstreaming CSS. Major topics identified at this Peer Exchange included: further action and resources required nationally advance and promote CSS, project delivery, multi-disciplinary teams, stakeholder involvement, CSS in planning and developing highway improvement projects, managing change and mainstreaming CSS, and state DOT CSS programs and action plans. The purpose of this research is to provide the resources needed to support key activities aimed at developing and advancing an industry wide action plan to advance CSS implementation and research. The objective of this research is to stimulate a much larger and more comprehensive action	$100,000

	plan to advance CSS research, technical guidance, training and education, and technology transfer.	
CSS Pooled Fund Study	A CSS Pooled Fund Study (PFS) will be established to provide a forum to identify, prioritize, fund, and pursue projects or activities that are aimed at addressing the collective challenges State and local agencies are facing with implementing CSS. This research is aimed at advancing how agencies integrate CSS into the appropriate program and highway improvement specific investment decision-making processes. The goal of the CSS PFS is to assemble regional, State, and local agencies and the Federal Highway Administration (FHWA) to: (1) identify the key issues and challenges agencies are facing with advancing CSS; (2) suggest approaches to address those issues and advance current practices; (3) initiate and monitor projects intended to address identified issues; (4) disseminate project results; (5) promote implementation of results; and (6) share information and practices. This research effort will provide the necessary technical assistance, administrative support, and services to support the CSS PFS.	$200,000

Anticipated Research Efforts in Planning

US/Canada and US/Mexico Border Planning

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Research Activity or Project	Project Summary	STEP Budget
US/Canada Border Planning: FHWA Share of Northern Border Transportation Pooled Fund Study	The purpose the Northern Border Transportation Pooled Fund Study is to support studies and other activities designed to improve the safe and efficient movement of people and vehicles between the U.S. and Canada. These studies and activities will be conducted in coordination with the activities and subcommittees of the U.S.-Canada Transportation Border Working Group (TBWG), which is a	$125,000

	bi-national group that brings together transportation and border agencies and other organizations to coordinate transportation planning, policy implementation, innovative finance efforts and technology deployment to enhance border infrastructure and operations. The Federal Highway Administration will administer the pooled fund, taking direction from a steering committee made up of any of the eleven northern border States (Maine, New Hampshire, Vermont, New York, Michigan, Minnesota, North Dakota, Montana, Idaho, Washington and Alaska) that choose to participate in this study.	
FHWA Share of US/Mexico Joint Working Committee (JWC) Pooled Fund Study	The purpose of the US/Mexico Joint Working Committee (JWC) Pooled Fund Study is to support international land border transportation facilitation through the U.S.-Mexico Joint Working Committee. The JWC is a bi-national group whose focus is to cooperate on land transportation planning and the facilitation of efficient, safe, and economical cross-border transportation movements. The group is comprised of transportation professionals from FHWA and the Mexican Secretariat of Communication and Transportation (SCT) and representatives from the U.S. Department of State (DOS), the Mexican Secretariat of Foreign Relations (SRE), the four U.S. border State Departments of Transportation (DOT), and the six Mexican border States. The members meet twice a year to develop and implement work plans and address border issues.	$150,000
Border Outreach/Coordination and Technical Support	The purpose of this effort is to support conferences, Web sites and workshops that address transportation in the border region between the US, Canada and Mexico. Examples of activities include: ▪ Support the semi-annual meeting of the US/Mexico Joint Working Committee ▪ Support the semi-annual meeting of the US/Canada Transportation Border Working Group ▪ Support Innovative Finance/Public Private Partnership workshops ▪ Support the Joint Border Conference with CBP and GSA ▪ Support workshop to address specific issues. ▪ Support WEB sites and outreach activities that address border issues.	$100,000
US/Canada Border Planning: National	The National Roadside Survey (NRS) is a data collection effort	$25,000

Roadside Survey Pooled Fund Study	completed by the Canadian Government to collect data from commercial vehicles. It is conducted along major corridors in Canada. The NRS is conducted about every five to seven years, with the last NRS being conducted in 1999. Part of the proposal for this year's NRS is to have a border survey component, where data will be collected at the major border crossings. Data from this effort will provide a rich data set useful to many transportation stakeholders for a variety of planning and project related analyses. The US stakeholders worked with the Canadians to develop the survey. The pooled funds will cover a portion of the costs associated with the border survey data collection. FHWA and any border states that choose to participate will receive the data and other deliverables.	

National Security, Defense and Interstate Planning

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Research Activity or Project	Project Summary	STEP Budget
National Highway System Designation and Product Development	The National Highway System (NHS) is approximately 160,000 miles of roadway important to the nation's economy, defense, and mobility. The NHS includes the Interstate, other principal arterials, STRAHNET, and intermodal connectors. Roads on the NHS are eligible for NHS apportioned program funds. To record the official extent of the NHS, FHWA uses digital spatial databases and maps to record and maintain the current system and all subsequent modifications to the highway designations. The objective of this research is to support mapping activities necessary for recording the extent of National Highway System. The map sets are coded onto the National Highway Planning Network—a geo-spatial digital highway network that FHWA uses to produce maps posted on the official	$140,000

	NHS Web page. The activities for the NHS web site are on going activities. In addition a product of this research will result in a new release of an NHS network coding CD anticipated in Summer 2007. The NHS Web site has, for many months, ranked in the top 10 visited FHWA Web sites and is used for research by a number of institutions (not just government).	
Highway System and Corridor Support	This work supports research related to several specific activities in Title 5 of SAFETEA-LU, such as Sections 5504 for the Center for Transportation Advancement and Regional Development) and 5513(f) for Rural Transportation Research by the New England Transportation Institute. It also supports research and research related work involving the Transportation Assets and Needs of the Delta Region (Section 1923 of SAFETEA-LU), similar research related work for the National Corridor Planning and Development Program (NCPD program) and the Coordinated Border Infrastructure Program (CBI program) programs (Sections 1118 and 1119 of TEA-21), the Delta Region Transportation Development Program (Section 1308 of SAFETEA-LU) and research related work based on National Highway System designation activities. Finally, this work supports FHWA's participation and service to the TRB, especially the Committee on Transportation and Economic Development. These activities are ongoing. Typical activities include analyzing and tracking research results, developing material to support comments to grantees during the course of the grant, formatting images for use in research and research related products and management of databases used to support research.	$125,000
Interstate Designation Procedures	Modifications to the Interstate (which is a part of the National Highway System) require coordination between the FHWA and the State DOTs, and in some cases with MPOs. The FHWA reviews current policy, laws, and regulations in evaluating and approving State requested systems modifications (i.e., add, remove, re-align). There is frequently considerable political interest in these actions and sometimes short deadlines in which to accomplish the FHWA designation action. In a number of cases, the designation is based on, or triggered by statutory language. Some of the FHWA actions are on sections that have been identified as 'future Interstates' based either on Congressional action or on State DOT requests.	$35,000

	The objective of this research is to document elements of the designation process. The product of this research will be a handbook on Interstate designation procedures.	

Congestion

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Research Activity or Project	Project Summary	STEP Budget
Congestion	The objective of this research will be to promote activities to support the "National Strategy to Reduce Congestion on America's Transportation Network" as well as support other initiatives to link operations and planning. Research could focus on road/congestion pricing and private sector involvement in transportation investment, and management and operations. This research will support work to advance analysis tools for use in the evaluation of operational improvements and strategies in transportation planning, advance the Congestion Management Process (CMP), and provide for information dissemination on these topics. This research could also result in the development of new tools and programs for understanding, analyzing and responding to congestion problems. It will support activities such as: Web sites, publications, and brochures, for information dissemination, training and technical assistance, toolkits, case studies and site visits, peer exchanges, conferences and workshops. Research projects will be selected based on stakeholder input and on priorities from the U.S. DOT Secretary's Congestion Initiative. In addition, FHWA will disseminate information and technical assistance on using access management to reduce congestion. This information will include the 2006 access management (AM) primer and video (DVD) that	$650,000

	explains access management to business owners. Further, FHWA work with the Local Technical Assistance Program (LTAP) to reach a wide variety of local planners and engineers.	

Safety Planning

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Research Activity or Project	Project Summary	STEP Budget
Safety Planning	Transportation safety is by nature a multi-disciplinary endeavor, requiring coordination among engineering, law enforcement, public education, and emergency services professionals who may not share a history of close working relationships. Holistic, comprehensive planning for transportation safety must find solutions to safety problems that effectively blend these four types of strategies. And in the past few years, events have re-shaped the institutional environment in which transportation safety planning occurs, including requirements for Strategic Highway Safety Plans (SHSPs), a stand-alone federally required safety planning factor, and continual improvements in data collection. In this environment, planners must play key roles in identifying strategies to be funded with transportation dollars. The objective of this research is to help transportation planners determine how to best incorporate safety into the transportation planning process and identify the most effective combination of transportation safety strategies according to local conditions. Key areas of focus will be: improvements to safety data collection and management, potential roles of elected officials in promoting safety goals within transportation planning processes, analysis tools, supporting transportation safety planning on tribal lands, and best practice case studies of successful transportation safety planning efforts. Research would include an area that received attention for STEP stakeholders: improving safety for non-motorized travelers. Research could develop new tools and methods for use in bringing an analytical	$80,000

	approach to transportation safety.	

Freight Planning

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Research Activity or Project	Project Summary	STEP Budget
Freight Planning	Across most of the country, freight movements are growing as a share of transportation system volumes. The objective of this coordinated research approach will be to promote the integration of freight into the transportation planning and programming processes at the State and metropolitan levels. Freight transportation issues are complex and involve many stakeholders who have different perspectives on the freight transportation system. Educating and training a skilled and knowledgeable workforce is crucial to increasing freight transportation productivity. Research could focus on how to effectively engage the private sector freight community into the State and metropolitan planning processes; how parameters such as price, travel time, permitting, and user fees affect modal shift; what elasticities are inherent in these parameters; and the benefits/cost analyses of freight projects. Research could also develop new tools and programs such as freight analytical techniques, freight modeling improvements, methods of innovative freight data collection and data sharing, as well as pilot projects. This research will support activities such as: Web sites for information dissemination, training and technical assistance, toolkits, peer exchanges, sharing of best practices, conferences, and workshops.	$100,000

Public Involvement, Environmental Justice, and Visualization in Planning

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Research Activity or Project	Project Summary	STEP Budget
Building on a Foundation of Public Participation and Community Impact Assessment and Incorporating Emerging Issues of Environmental Justice and Visualization for Transportation Planning	There is a continued need for assessing and communicating changes in public involvement and community impact assessment practice. There also is a need to respond to increasing turnover at state and local transportation planning agencies so they are able to carry out requirements through technical transfer and training. Environmental justice and visualization are emerging areas of research and practice for transportation planning practitioners. There is increasing awareness among state departments of transportation, metropolitan planning organizations and other government agencies of the importance of ensuring civil rights and environmental justice in the planning process for transportation when there is a greater opportunity for avoiding impacts. Visualization applied to transportation planning is an emerging area of both research and practice. Stakeholders from state departments of transportation, metropolitan planning organizations and other interested parties are concerned about how to effectively apply visualization. Most agencies and practitioners have little or no awareness of examples. Research in visualization would result in (1) successful adoption of new federal planning requirements for adopting visualization and (2) improved communication between transportation practitioners, decision-makers and the public.	$425,000

Other Activities that Support State/Local/Tribal Planning Capacity Building

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Research Activity or Project	Project Summary	STEP Budget

Examples of SAFETEA-LU Implementation	On August 10, 2005, the President signed into law the **Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users** (SAFETEA-LU). SAFETEA-LU introduced a number of new requirements in the statewide and metropolitan transportation planning process. In addition, FHWA is comprehensively updating the regulations that outline the requirements for State departments of transportation (DOTs), metropolitan planning organizations (MPOs) and public transportation operators to conduct a continuing, comprehensive and coordinated transportation planning and programming process in metropolitan areas and States. State DOTs, MPOs, and others in the transportation community need to understand how to adjust their current processes to meet the new requirements of SAFETEA-LU and the regulations. This research will provide case studies, peer exchanges, workshops and other examples of effective statewide and metropolitan transportation planning practice to implement new and adjusted planning requirements. The specific efforts within this research project will be determined based on consultation with major transportation planning stakeholder organizations and other customer feedback. Results will be posted on FHWA Web sites and disseminated through written reports, case studies and presentations.	$275,000
Statewide Transportation Planning Issues	States are required to conduct continuing, comprehensive and collaborative intermodal statewide transportation planning that facilitates the efficient, economic movement of people and goods in all areas of the state, including metropolitan areas. This research will focus on statewide transportation planning issues, including statewide travel and economic models, managed lanes, public-private partnerships and design-build initiatives; as well as the State department of transportation's interaction with other federal, State and local agencies and other transportation planning organizations. This research will support activities such as: Web sites for information dissemination, training and technical assistance, toolkits, peer exchanges, sharing of best practices, conferences, and workshops.	$200,000
Metropolitan Transportation Planning Issues	Metropolitan transportation planning is the process of examining travel and transportation issues and needs in metropolitan areas. In	$200,000

	metropolitan areas over 50,000 population, the responsibility for transportation planning lies with designated Metropolitan Planning Organizations. This research will focus on issues unique to the more than 380 MPOs throughout the country. Given the importance of MPOs and the variety and variability among MPOs, research, technical assistance and information dissemination expressly for MPOs is important to ensure successful continuing, cooperative and comprehensive planning processes. Research activities will be based on stakeholder needs as expressed by: a) the Association of Metropolitan Planning Organizations (AMPO); b) the National Association of Regional Councils (NARC); c) research needs identified at the 2006 Transportation Research Board (TRB) Conference, The Metropolitan Planning Organization, Present and Future: A Conference; and d) other stakeholders. Research will focus on the collaborative nature of MPOs, MPO functionality and identify opportunities for MPOs to coordinate and/or link with other planning and transportation activities and/or organizations.	
Rural Transportation Planning Issues	Rural transportation planning is the process of examining travel and transportation issues and needs in non-metropolitan areas. In small communities and rural areas there is no federally designated body to do transportation planning. In some states, planning for these areas is undertaken by the State Department of Transportation. In other states, these functions are performed by Rural Planning Organizations (RPO) or local governments. This research will focus on issues and problems in rural areas and the rural community's interaction with the Statewide transportation planning process. Research activities will be based on stakeholder input and on coordination with major rural transportation planning stakeholder associations such as the National Association of Development Organizations, the National Association of Counties and RPO America. This research will support activities such as: Web sites for information dissemination, training and technical assistance, toolkits, peer exchanges, sharing of best practices, conferences, and workshops.	$130,000
Tribal Transportation Planning Issues	The objective of this coordinated research approach will be to promote the integration of tribal issues into the transportation planning and programming processes at the State and metropolitan levels through the statutory and regulatory requirements of consultation and public involvement. Several factors have heightened the need to assist Tribal	$150,000

	governments, including effective governmental participation in transportation programs and projects affecting tribal government interests, cooperation on mutual transportation issues and projects between tribal, local, state, and federal governments, as well as early outreach and coordination with tribes. Research could focus on developing resource/reference materials on effective tribal consultation practices in the statewide and metropolitan transportation planning process, implementing "Information Tools" modules for use by tribes, establishing a Tribal Technical Working Group, as well as developing frequently asked questions on tribal planning.	
Finance Issues	Financial planning, fiscal constraint, cost estimating, revenue forecasting, and innovative finance issues are all important areas of concern for State departments of transportation, metropolitan planning organizations, local and regional project sponsors and the public. In order to ensure transparency, integrity and accuracy in the transportation planning process, metropolitan transportation plans, transportation improvement programs (TIPs) and Statewide transportation improvement programs (STIPs) must contain realistic estimates about project costs and be based on realistic assumptions about future revenue. Plans and programs should not simply be "wish lists" for a community's projects. This research will focus on a wide variety of financial issues. This research will provide case studies, peer exchanges, workshops and other examples of effective statewide and metropolitan transportation planning practice on finance and financial planning issues. The specific efforts within this research will be determined based on consultation with major transportation planning stakeholder organizations and other customer feedback.	$220,000
Planning and Environment Linkages, Additional Support	The Planning and Environment Linkages (PEL) initiative, a joint effort between the Office of Planning and the Office of Project Development and Environmental Review, has focused on promoting PEL concepts through the delivery of customized Linking Planning and NEPA workshops in 24 states, each resulting in an Action Plan to implement the concepts discussed. The main thrust of FY 07 STEP activities for PEL will be to identify and deliver key additional assistance to support state, regional, and local transportation agencies as they move forward with implementing PEL concepts and addressing the environmental-related provisions of SAFETEA-LU Section 6001.	$700,000

Planning and Environment Linkages, Training	See above description.	$100,000
Land Use and Transportation	The objective of this research will be to promote the integration of land use planning and transportation planning at the State and local level. Research could focus on enhancing techniques to engage the public and policy-makers in decision-making about land use and transportation; effective applications of both technical and non-technical approaches and tools; and addressing jurisdictional and institutional issues. This research will also promote the use of Scenario Planning and Scenario Planning tools to provide a framework for developing a shared vision for the future by analyzing various forces (e.g., health, transportation, economic, environmental, land use, etc.) that affect growth. This research will support activities such as: Web sites for information dissemination, training and technical assistance, toolkits, peer exchanges, conferences and workshops. Research could also develop new tools and programs such as land use and transportation models, as well as pilot projects.	$150,000
Information Dissemination	This research will support the overall efforts of STEP and the FHWA/FTA Transportation Planning Capacity Building Program (TPCB) by disseminating the results of research programs to the transportation planning community, decision makers, stakeholders and the public. Several stakeholders commented to the STEP Web site on the importance of and need for information dissemination and the TPCB. This research will support the continuation of existing FHWA and stakeholder Web sites, training, national and regional conferences and case studies on transportation planning. The information included in these efforts will be based on STEP research as well as relevant transportation planning research by other FHWA offices, other DOT and federal agencies, the Transportation Research Board and the National Cooperative Highway Research Program, and transportation planning stakeholder groups.	$200,000
Improved Planning Process/Process Management	Transportation helps shape an area's economic health and quality of life. Not only does the transportation system provide for the mobility of people and goods, it also influences patterns of growth and economic activity through accessibility to land. Furthermore, the performance of this system affects such public policy concerns as air quality, environmental resource consumption, social equity, economic	$310,000

	development, safety, and security. Transportation planning recognizes the critical links between transportation and other societal goals. This research will improve the transportation planning process by focusing on specific concepts that can affect change, such as Asset Management, Performance Measures, Certification Review Tools, Data/Modeling. The Office of Planning will select research areas based on the STEP feedback and assessment of national state-of-the-practice. Further, the Office of Planning will support improved tools for the required Transportation Management Area federal Certification Reviews, through this research topic.	

Emphasis Areas Related to Tools to Support Planning and Environment

GIS and Spatial Information for Improved Decision-Making

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Research Activity or Project	Project Summary	STEP Budget
GIS Outreach and Promotion	The objective of this research will be to market and promote new technology and innovative and effective uses of geospatial technology. Specific tasks may include: The enhancement of our GIS in Transportation Web site—adding examples of geospatial applications from State DOTs, MPOs and other transportation agencies; providing information regarding training workshops and peer reviews, links to literature and data, and general GIS resources; the research of effective data sharing strategies and agreements; and handbooks for marketing the benefits of GIS and geospatial technology. The outreach will combine technical discussions of advanced technology, documentation	$100,000

	of benefits and broader information directed at improved decision-making.	
Best Practices & Case Studies	This project will identify and document best practices and benefits of GIS at all levels of government in a variety of transportation-related professions, e.g. transportation planners, information technology professionals, safety, law enforcement, operations, maintenance, etc. While determining best practices (according to certain criteria, guidelines, quality, etc), the project will also evaluate and measure benefits of GIS technology. A series of case studies focused on applications with advanced capabilities in using geospatial technologies for improved decision making in transportation areas, such as design, maintenance, the environment, safety will also be developed. Candidate states may include: Michigan, Oklahoma, Arkansas, California, or Pennsylvania, and Vermont.	$50,000
Training	This goals of this project are: to develop new training activities or enhance existing activities to provide learning opportunities and raise the level of geospatial technology expertise within the transportation community, disseminate information about geospatial technologies and its uses in transportation and educate upper management in GIS technology and the benefits for improved information for decision-making. Specific tasks include: ▪ Update NHI 151039 Applying GIS and Spatial Data Technologies to Transportation ▪ Develop new training course on the Application of Visualization to Transportation ▪ Update current workshop on GIS for Environmental Streaming ▪ Provide additional workshops tailored to specific customer needs as needed.	$75,000
Study of Business Models for GIS & Transportation	Produce a report that identifies effective organizational structures and business models, including human resources considerations, such as position descriptions and qualifications that support the development and implementation of geospatial technologies. These structures and policies will need to be flexible enough to accommodate changing technologies. These structures will show how organizations have been successful in the implementation of GIS in transportation to improve the management of the transportation system.	$50,000

Spatial Integration of Local Agency Inventory Information	Federal program development requirements have placed an increased emphasis on using information across state, MPOs and local agencies in developing the transportation program and transportation decision-making. An example within SAFETEA-LU is the requirement of the states to annually identify the top 5% of locations exhibiting the most severe safety needs, which include both state and local agency jurisdictions. Policy level planning decisions often involve the analysis of transportation needs across agencies and modes. The objective of this research is to develop a framework with proposed methodologies to transfer local agency spatial information for incorporation into state transportation program development activities. This framework will address: major categories of data, metadata, common sources and formats of spatially related information, procedures for incorporating spatial information, guidelines to assist local agencies in packaging spatial information for use by other agencies.	$50,000
Development of the Transportation for the Nation Concept	This effort is a partnership with National States Geographic Information Council (NSGIC) to develop the concept of a comprehensive inventory of all transportation assets in a State that can support, enhanced Safety, Security, E911 and Transportation Decision making using existing transportation networks and data sources. A framework will be identified to pull together existing networks and attributes information related to transportation that is accessible in common data formats. The objectives are: ▪ To identify the lead organization/person in each state for Transportation Information ▪ Each State Transportation Coordinators develop a comprehensive transportation inventory of transportation networks and information within the State ▪ States identify best practices for providing access to comprehensive transportation information and coordination with transportation information providers ▪ State Transportation Coordinator meet to identify common needs and how best to coordinate between the states and identify the needs for standards and gaps in the transportation information available for Transportation for the Nation	$25,000

	▪ Develop data sharing protocols between local, city, county and state transportation agencies as needed identified by the State Transportation Coordinators ▪ Create a Statewide Transportation Information clearing house that can provide comprehensive information on all transportation networks and information ▪ Develop a national portal into the State Transportation Clearinghouse to provide a comprehensive look at the Nation's Transportation System ▪ Identify ways to enhance safety, security and transportation decision-making based on the comprehensive Transportation information at the State/National level The result will be Transportation for the Nation to address global and nation transportation needs and can be a common base for all transportation related spatial applications that will result in considerable cost savings.	

Travel Modeling

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Research Activity or Project	Project Summary	STEP Budget
Travel Model Improvement Program (TMIP) Outreach, Knowledge Base and Peer Reviews	The TMIP Outreach helps planning agencies build their institutional capacity to perform travel related technical analyses. This is done through the TMIP Clearinghouse and Web site, delivering training and technical assistance, stakeholder feedback and facilitating communication. This project will maintain the TMIP Outreach Program (includes the TMIP listserv, Information Clearinghouse, training courses, seminars, presence at conferences, periodic newsletters on travel modeling topics, an annual report on the TMIP Program and an annual summary of the peer review program). Subject to availability of funding through a pooled funds arrangement, the TMIP Knowledge Base will	$250,000

	summarize discussions from the TMIP listserv and prepare up to date summaries of academic research, consulting projects and conferences. The Technical Peer Review Program (TPRP) will directly support individual agencies in the improvement of their modeling processes. The TPRP will provide outside travel forecasting experts to review agency travel models and develop unbiased recommendations for changes and improvements in modeling processes.	

Program Management and Outreach

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Research Activity or Project	Project Summary	STEP Budget
STEP Program Outreach	Some of the specific products for the STEP Program Outreach efforts for FY2007 will include the following: STEP Web site; STEP Feedback System; peer review; and FY2007 STEP Research Plan; reports; and other outreach materials.	$342,000
Web site support for HEP Research and Programs	Web site support for HEP Research and Programs.	$355, 000
Financial management support for STEP and planning and environment research and program initiatives	Financial management support for STEP, and planning and environment research and program initiatives.	$303, 000